

IN THE CLAIMS:

Please amend claims 1-2, 4, 6-8, 10-17, and 20-29 as follows. Please cancel claims 5, 9, and 30 as follows. Please add new claim 31 as follows.

1. (Currently Amended) A method for locating a mobile terminal in a communications network, the method comprising the steps of:

selecting and applying one of a plurality of available location methods to estimating estimate a location of the a mobile terminal in a communications network; and selecting and applying one of a plurality of available confidence methods to calculate a region around the estimated location in which the terminal could be located within a specified probability.

2. (Currently Amended) A method according to claim 1, wherein the step of estimating a selected location method estimates the location of the mobile terminal is performed using multiple sources of information.

3. (Previously Presented) A method according to claim 2, wherein the communications network comprises multiple cells and each source of information comes from a respective one of the multiple cells.

4. (Currently Amended) A method according to claim 2, wherein the mobile terminal is served by multiple cells of the communications network simultaneously and each source of information comes from a respective one of the multiple cells.

5. (Cancelled)

6. (Currently Amended) A method according to claim-5_1, wherein if the selected location method for estimating the location is unsuccessful when applied, the method further comprises the further step of sequentially selecting and applying one or more others of the available location methods until a selected method is successfully applied.

7. (Currently Amended) A method according to claim-5_1, wherein the available location methods include an algorithm using information from one cell of the communications network; an algorithm using information from multiple cells of the communications network; and a numerical method using information from multiple cells of the communications network.

8. (Currently Amended) A method according to claim-5_1, wherein the preferred location method can be specified selected by setting a variable.

9. (Cancelled)

10. (Currently Amended) A method according to claim-9_1, wherein if the selected confidence method for calculating a region is unsuccessful when applied, the method further comprises ~~the further step of~~ sequentially selecting and applying other of the available confidence methods until a selected method is successfully applied.

11. (Currently Amended) A method according to claim-9_1, wherein the available confidence methods for calculating the region include [:]an ellipse algorithm; a circle algorithm; an arc algorithm; and a polygon algorithm.

12. (Currently Amended) A method according to claim-9_1, wherein the confidence methods include use of a parameter to calculate the region such that the probability of the mobile's exact location being in that region equals the parameter.

13. (Currently Amended) A method according to claim-9_1, wherein the step of estimating a location of the mobile terminal comprises ~~the steps of~~ selecting and applying a preferred method for estimating the location from a number of available methods, and wherein the selected location method for estimating the location and the selected confidence method for calculating the region together result in one of a number of shapes of region in which the mobile terminal could be located, the shape being dependent on the selected confidence method for calculating the region.

14. (Currently Amended) A method according to claim 9_1, wherein the step of estimating a location of the mobile terminal comprises ~~the steps of~~ selecting and applying a preferred method for estimating the location from a number of available methods, and wherein the method further comprises ~~the further step of~~ applying a rule that specifies which of the possible location methods for estimating the location is used together with what available confidence methods for calculating the region.

15. (Currently Amended) A method according to claim 1 wherein the step of selected location method for estimating a location further comprises ~~the step of modelling~~ modeling a cell of the communications network.

16. (Currently Amended) A method according to claim 1, wherein the step of selected confidence method for calculating a region around the estimated location in which the mobile terminal could be located further comprises ~~the step of modelling~~ modeling a cell of the communications network.

17. (Currently Amended) A method according to claim 1, wherein the communications network comprises a service area, the service area containing a number of cells including a cell in which the mobile terminal is located.

18. (Original) A method according to claim 17, wherein the service area is represented by the geographical region served by the cells in the service area.

19. (Original) A method according to claim 18, wherein the geographical region representing the service area is the region enclosed by a closed curve enclosing all borders of the geographical region served by the cells in the service area.

20. (Currently Amended) A method according to claim 18, wherein the step of selected location method for estimating the location comprises a calculation of the mass centre center of the geographical region representing the service area.

21. (Currently Amended) A method according to claim 18, wherein in the step of selected location method for estimating a location, the communications network service density is treated as being constant over the geographical region representing the service area.

22. (Currently Amended) A method according to claim 18, wherein the step of selected confidence method for calculating a region around the estimated location in which the mobile terminal could be located treats the communications network service density as constant over the geographical region representing the service area.

23. (Currently Amended) A method according to claim 18, wherein in the step of selected location method for estimating a location the communications network service density in the service area is treated as being not constant over the geographical region representing the service area.

24. (Currently Amended) A method according to claim 18, wherein the step of selected confidence method for calculating a region around the estimated location in which the mobile terminal could be located treats the communications network service density as not constant over the geographical region representing the service area.

25. (Currently Amended) A method according to claim 23, wherein the communications network service density in any given location of the geographical region representing the service area depends on the number of cells serving that given location.

26. (Currently Amended) A method according to claim 1, applied in a 3GPP third generation partnership project telecommunications network.

27. (Currently Amended) A method according to claim 1, applied in a Service Area Identifier service area identifier location method.

28. (Currently Amended) A method according to claim 1, applied in a ~~Cell Identity~~
~~cell identity and Round Trip Time~~~~round trip time~~ location method.

29. (Currently Amended) ~~A location module~~ ~~An apparatus arranged to calculate~~
~~the location of a mobile terminal in a communications network, the location module~~
comprising:

~~means for estimating~~ ~~selecting and applying one method from a plurality of~~
~~location methods to estimate~~ ~~a location of the~~ ~~a mobile terminal in a communications~~
~~network; and~~

~~means for calculating~~ ~~selecting and applying one method from a plurality of~~
~~confidence methods to calculate~~ ~~a region around the estimated location in which the~~
mobile terminal could be located.

30. (Cancelled)

31. (New) An apparatus, comprising:

an estimator configured to select and apply one method from a plurality of
location methods to estimate a location of a mobile terminal in a communications
network; and

a calculator configured to select and apply one method from a plurality of confidence methods to calculate a region around the estimated location in which the mobile terminal could be located.